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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,238

01/03/2006

Masayuki Uda

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38834 7590 01/26/2007
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EXAMINER

MIDKIFF, ANASTASIA

ART UNIT

PAPER NUMBER

2882

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/563,238	Applicant(s) UDA, MASAYUKI	
	Examiner Anastasia Midkiff	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Replace "canceled" with -- cancelled-- in Line 3 of Paragraph 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent to Ciccarelli et al. (USP# 4,263,510).

With respect to Claim 2, Ciccarelli et al. teach an energy dispersion type x-ray diffraction/spectral device (Column 4, Lines 12-35) comprising:

- a white x-ray generating means (22);
- an x-ray detecting means (26);
- a specimen support (12, 14, 18) interposed between said white x-ray generating means and said x-ray detecting means (Figure 1), said specimen support having positioning members (30, 32, and Column 4, Lines 18-19) which are capable of positioning said white x-ray generating means and said x-ray detecting means relative to each other in either a

first position or a second position (Figures 3 and 4, and Column 4 Lines 36-50);

The following limitations are drawn to functional limitations that do not distinguish the claimed invention over the prior art insofar as they do not impose any particular structural limitation upon the apparatus. Furthermore, the apparatus of Ciccarelli et al. is equally capable of performing the claimed functions in that the sources and detectors of Ciccarelli et al. are positionable to obtain intensity data at a first and second position:

- wherein said x-ray diffraction/spectral device obtains intensity data for each level of energy at the first position to obtain first data and at the second position to obtain second data (Column 4, Lines 24-50);
- wherein said x-ray diffraction/spectral device obtains third data which is data regarding diffracted x-rays and is based on a difference between said first data and said second data (Column 4, Lines 29-35);
- wherein said x-ray diffraction/spectral device obtains data regarding fluorescent x-rays from the difference between the first or second data and third data (Column 4, Lines 29-35).

Response to Arguments

Applicant's arguments with respect to claim 2 have been considered but are not persuasive.

With respect to Claim 2, the Applicant asserts that Ciccarelli et al. does not disclose that x-ray diffraction/spectral device obtains intensity data for each level of energy at two positions, as the first position of Ciccarelli has an angle of zero degrees. The examiner respectfully disagrees.

In response to Applicant's argument that the prior art does not teach all of the functional limitations of the claims, the examiner notes that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. (In re Schrieber, 128 F.3d 1472, 1477-78, 44 USPQ2d 1429, 1431-32 Fed. Cir. 1997.) Absent any specific structure required to meet the function, the apparatus of Ciccarelli et al. performs the functions equally well as the apparatus of the present invention, and, therefore, meets the limitations of the claims as recited. (See MPEP 2114.)

As cited in the above rejection, Ciccarelli et al. teach an x-ray diffraction and fluorescence device, wherein the detector and source are positioned in a range of angles (Θ , Column 4 Lines 36-50) so that the detector and energy-dispersive analyzer analyzes "both x-ray fluorescent emission and absorption spectra and x-ray diffraction patterns generated by incidence of the collimated x-rays on the specimen" (Column 4, Lines 31-35). Furthermore, the apparatus of Ciccarelli et al. is equally capable of performing the claimed functions in that the sources and detectors of Ciccarelli et al. are positionable to obtain intensity data at a first and second position (Column 4, Lines 24-50).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent documents to: Kaylon et al. (US 6,751,287 B1) regarding the movement of x-ray detectors, sources, and samples for obtaining diffraction data of a sample; and to Yamamoto et al. (US 4,916,720), De Bokx et al. (US 5,745,543), and Dosho (US 6,285,736 B1) regarding a combined XRD/XRF analyzing apparatus.

Non-patent documents to: Yellipeddi et al. article for Advances in x-ray analysis, Vol. 42, Pp. 126-136 (2000), Rindby et al. article to Nuclear Instruments and Methods in Physics Research B, Vol. 124, Pp. 591-604 (1997), and Cornaby et al. article to Measurement Science and Technology, Vol. 12, Pp. 676-683 (2001) regarding combined XRD/XRF devices.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anastasia Midkiff whose telephone number is 571-272-5053. The examiner can normally be reached on M-F 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASM
1/10/06


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER